

to create a large number of very fine shorter cracks which are relatively isotropic in distribution;

a system for creation of laser radiation of the right space structure so as the breakdowns are generated inside several areas of the predetermined laser-induced damage volume;

a system for controlling energy level of laser radiation during creation of laser-induced damages;

a system for controlling duration of laser radiation during creation of laser-induced damages;

a system for controlling the space structure of laser-radiation focused at the predetermined points;

M an optical system focusing laser radiation at the predetermined point of a transparent material;

a system for adjusting the position of the focal point of the laser beam inside the treated object;

a computer system for controlling the laser beam generation and a system focusing and directing the said beam at the predetermined point of the treated object.

19. (New) The laser system in accordance with claim 18 generating the points inside a transparent material in a variety of different shades which comprise a range of gray shades between and including white and black.

20. (New) The laser system in accordance with claim 18 generating damage having a particular brightness by controlling the duration of the pulse.

21. (New) The laser system in accordance with claim 18 generating laser induced damage of a desired brightness by the energy packets of laser radiation.

22. (New) The laser system in accordance with claim 18 for creation of laser-induced damages by generating multi mode laser radiation, comprising many transverse mode TEM_{mn} .

23. (New) The system in accordance with claim 18 determining the structure of multi mode laser radiation and the energy level of the said laser radiation so as to reproduce particular desired brightness and gray shades of the damages forming an image.

24. (New) The system in accordance with claim 18 including means for controlling the values of integers m and n associated with the TEM_{mn} mode.

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Respectfully submitted,

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